

REMARKS

Claims 1-16 are pending in this application. By this response, a 37 CFR §1.132 declaration of Dr. Nijhuis (hereinafter "Declaration") is presented. Reconsideration of the application based upon the Declaration and the following remarks is respectfully requested.

Entry of the 37 CFR §1.132 declaration is proper under 37 CFR §1.116 because the Declaration: (a) places the application in condition for allowance, for the reasons discussed therein; (b) do not raise any new issue requiring further search and/or consideration, as the Declaration amplifies issues previously discussed throughout prosecution; and (c) places the application in better form for appeal, should an appeal be necessary. The Declaration is necessary and was not earlier presented because it is in response to arguments raised in the Final Rejection.

Rejection Under 35 U.S.C. §103(a)

Claims 1-16 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,442,003 (Takahashi) in view of U.S. Patent No. 6,942,757 (Iwama). This rejection is respectfully traversed.

In the previous Amendment filed on January 6, 2009, Applicants described in detail the structural differences between the claims aramid fibrils and the materials of Takahashi. Specifically, Applicants argued and demonstrated that the claimed aramid fibrils, which are free fibrils, are structurally different from the fibrillated pulp material described in Takahashi, which contains fibril-like materials that are attached to a stem. Applicants further argued and demonstrated that the respective materials differ in such properties as specific surface area.

In the Response to Arguments section, the present Office Action states that "[a]pplicants' argue that Takahashi discloses a conventional pulp with fibril-like materials that remain attached to a stem and thus are structurally different from the fibrils of claim 1.

In this regard, the examiner's position remains that there is no clear factual evidence on this record to substantiate this allegation."

In this respect, Applicants present the attached executed Declaration. The Declaration provides further clear factual evidence showing that Takahashi's pulp material contains fiber stems and extending fibrils, and that Takahashi's pulp material is structurally different from the aramid fibrils of claim 1.

More specifically, Fig. 2 of the Declaration, which is a microscopy photograph showing a pulp obtained by the method of Takahashi, shows the fiber stems as ribbon-like elements and the fibrils extending from these ribbon-like stems. To the contrary, Fig. 1 of the Declaration, which is a microscopy photograph showing a material obtained by the jet spun method of claim 4 of the present application, and corresponding to claim 1 of the present application, shows that the material contains fibrils and is free of ribbon-like stems. Therefore the Declaration already shows that, Takahashi's pulp material is structurally different from the fibrils of the claimed invention such as made by the method of claim 4. Furthermore, as a result of these structural differences, the properties of aramid fibrils of claim 1, such as the CSF and SSA, are likewise different from those of Takahashi's pulp material.

The Office Action also alleges that "Takahashi teaches fibrils that have a specific surface area of less than $7 \text{ m}^2/\text{g}$. Note Example 25." Applicants respectfully disagree. In Example 25, Takahashi discloses that a wet yarn was cut into pieces and then made into a pulp by a refining process, and also discloses that "[t]he result was about $2 \text{ m}^2/\text{g}$." However, because Takahashi's pulp material consists both of fiber stems and extending fibrils as shown in the attached Declaration, it is clear that Takahashi's description in Example 25 refers to the combined specific surface area of the fiber stems and the fibrils together, not the specific surface area of only the fibrils.

The Office Action also argues that "[a]s to the presence of fiber stems, the language of 'substantially free' does not necessarily exclude stems." While this may be true, the language does require that such stems be present in at most only a small amount, which would not materially affect the claimed aramid fibrils. The language thus further distinguishes the claimed aramid fibrils, which are completely or predominantly free fibrils, from the material of Takahashi, which includes substantial amounts of stems that significantly affect the properties of the material.

Because it is made clear that Takahashi's pulp material is structurally different from the aramid fibrils of claim 1, and because the properties (such as CFS and SSA) of the respective materials are different from each other, claim 1 is patentable over Takahashi and Iwama.

Regarding claim 4, although the Office Action confirms that "Takahashi does not teach that the fibrils are derived directly from the dope as required by claim 4," the Office Action alleges that "Iwama teaches a process ... comprising subjecting a para-aramid spinning dope to air gap spinning and coagulating the short fibers obtained." It appears that the Office Action contends that Iwama teaches direct spinning of a spin dope to pulp. Applicants respectfully disagree.

Iwama describes that fibers are obtained by air gap spinning, after which these fibers are cut into small pieces, followed by a pulp-making process for refining the cut fibers (Iwama, col. 2, lines 54-62). However, Iwama does not disclose a method wherein fibrils or pulp is directly obtained from the spin dope, without first making a fiber.

Because Iwama does not teach direct spinning of a spin dope to pulp, there is no showing of a reason or rationale why a person of ordinary skill in the art would have been motivated to modify the teaching of Takahashi by the direct spinning of a spin dope to pulp, with any reasonable expectation of success.

For the foregoing reasons, Takahashi and Iwama would not have rendered obvious the aramid fibrils of claim 1 or the method of making such fibrils in claim 4, therefrom or the claims dependant. Reconsideration and withdrawal of the rejection is respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-16 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Declaration Under 37 C.F.R. §1,.132
Petition for Extension of Time

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